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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,040	11/04/2003	William J. Begley	86828AEK	6165

7590 01/04/2005

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/701,040

Applicant(s)

BEGLEY ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-4-03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Since claim 1, upon which claim 19 depends, already recites the dopant is orange-red emitting, it is not seen how claim 19 further limits claim 1. Clarification and/or correction are required.
2. It is suggested that "the device" be changed to "a device" in claim 20.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 is drawn to a limitation comparing the device comprising the rubrene derivative of formula (I) with a device that does not contain rubrene. This claim is confusing, because the device as claimed also does not expressly comprise "rubrene". The claimed device comprises a derivative of rubrene according to formula (I) in claim 1. Clarification and/or correction are required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5-9, and 13-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugano et al. (JP 2002-097465). Sugano et al. discloses naphthacene derivatives as dopants in luminescent layers of organic electroluminescent devices (see abstract). The naphthacene derivatives 150, 152, and 154 (see par 46) as well as 220, 222, and 224 (see par. 59) read upon instant formula (I). The naphthacene derivatives are contained in a host in an amount of 0.001% to 50% by weight (see par. 65) per instant claims 5, 6, 22 and 23. Although Sugano et al. does not show specific formulas in the tables according to formulas (II), (III), and the compounds of claims 13-16, 21, and 24, it would have been obvious to one of ordinary skill in the art to have formed compounds according to these formulas, because Sugano et al. teaches all the required substituents (see par. 11). In addition, Sugano et al. does not show formulas 150, 152, 154, 220, 222, and 224 in an example where a device is formed using these specific compounds; however, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected these compounds for the luminescent layer of a device, because Sugano et al. clearly teaches these compounds as luminescent materials for a luminescent layer. Per instant claim 17, Sugano et al. discloses the host may comprise an amine compound (see par. 66) including alpha-NPD (see examples). Since Sugano et al. teaches naphthacene derivatives according to formula 1, the property limitations of claims 20, 25, and 26 are deemed to be

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inherently met by the Sugano et al. naphthacene derivatives. Per instant claims 27-29, Sugano et al. teaches the EL component is used for a flat light source or a display (see par. 1).

7. Claims 2, 3, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugano et al. (JP 2002-097465) in view of Kido et al. (Applied Physics Letters, Vol. 64, No. 7, 14 February 1994, pages 815-817). Sugano et al. teaches doping a luminescent layer with a naphthacene derivative, but fails to describe specifically that further compounds are added to the device in order to achieve white light emission. Kido et al. teaches in analogous art it is well known to add various dopant dyes, including blue colored dyes, to a luminescent layer in order to achieve white light emission. It would have been obvious to one of ordinary skill in the art at the time of the invention to have added fluorescent dyes to the luminescent layer of the Sugano et al. device in order to achieve white light emission, because Kido et al. teaches white light emission can be achieved by doping a luminescent layer with multiple fluorescent dyes and white light emission is a desired feature in luminescent displays.

8. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugano et al. (JP 2002-097465) in view of Jones (US 5,920,080). Sugano et al. fails to teach the electroluminescent device comprising a naphthacene derivative further comprises a filter. Jones teaches in analogous art it is commonly known to use a color filter in a full color display (see col. 11, lines 10-17). It would have been obvious to one of ordinary skill in the art to have used a color filter with the Sugano et al. to enhance further the quality of the color display, because Jones teaches filters are commonly used in electroluminescent devices.


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Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571)272-1523. The examiner can normally be reached on Monday through Friday.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dawn Garrett
Primary Examiner
Art Unit 1774

D.G.
December 13, 2004